

1/16

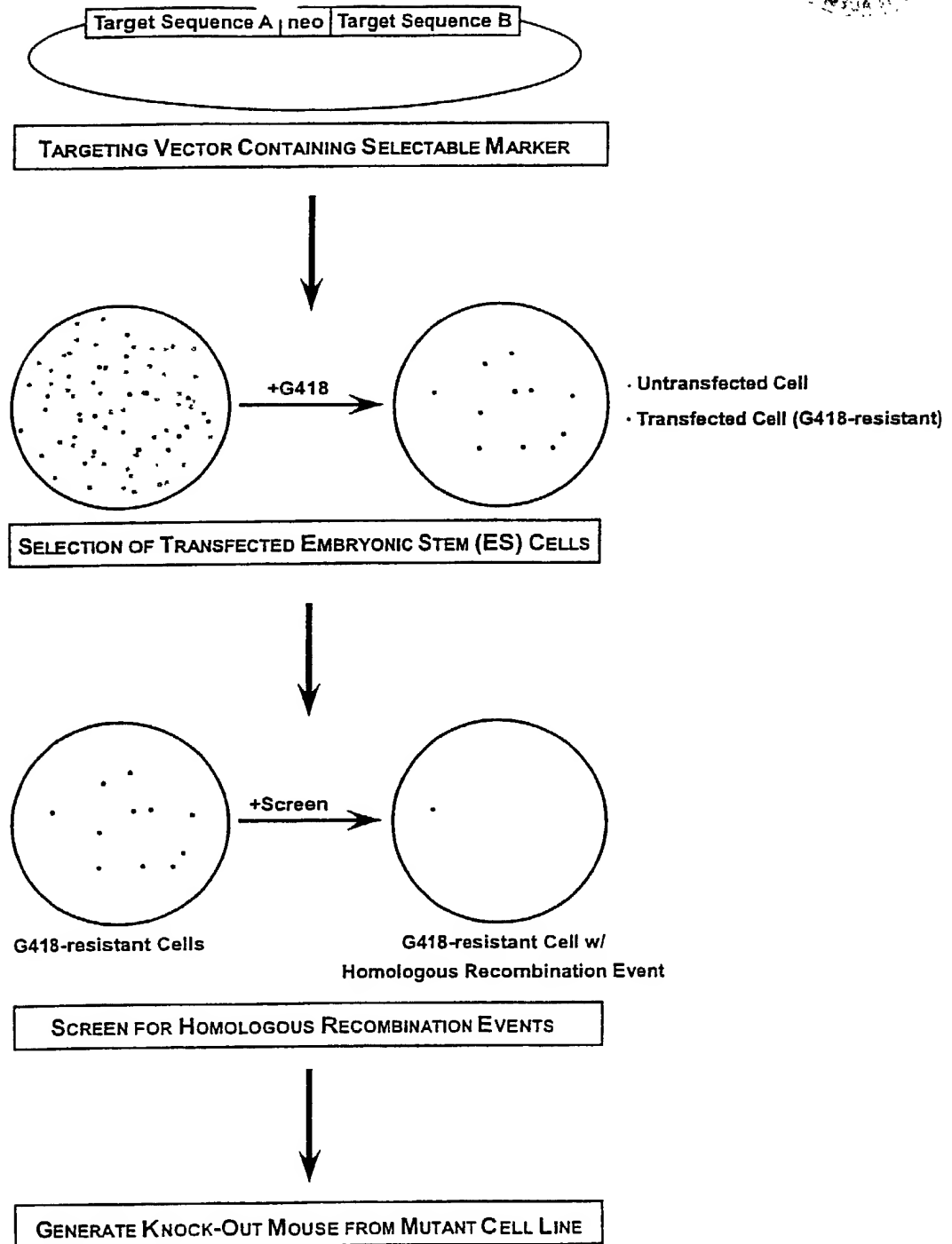


FIGURE 1

A.



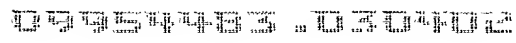
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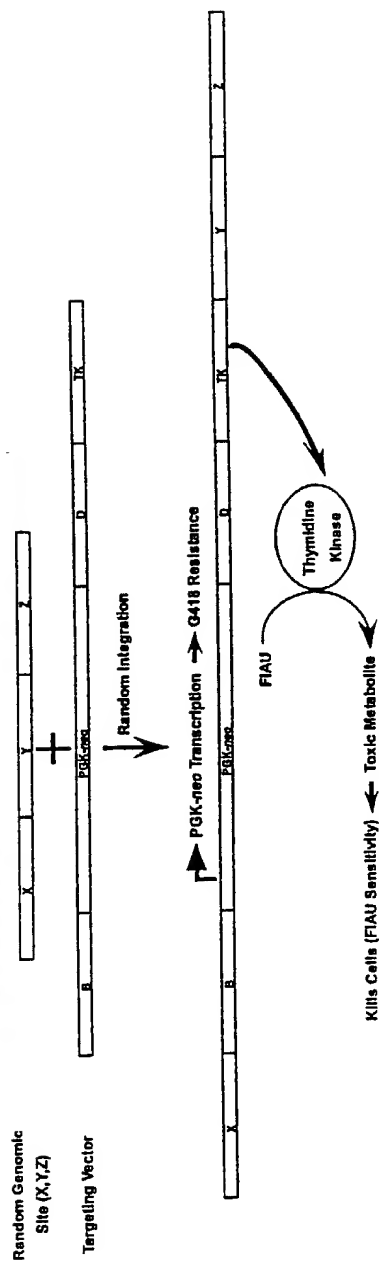
DISTINGUISH EVENTS BY SCREENING MOLECULARLY (PCR & SOUTHERN)

[illegible]

A.



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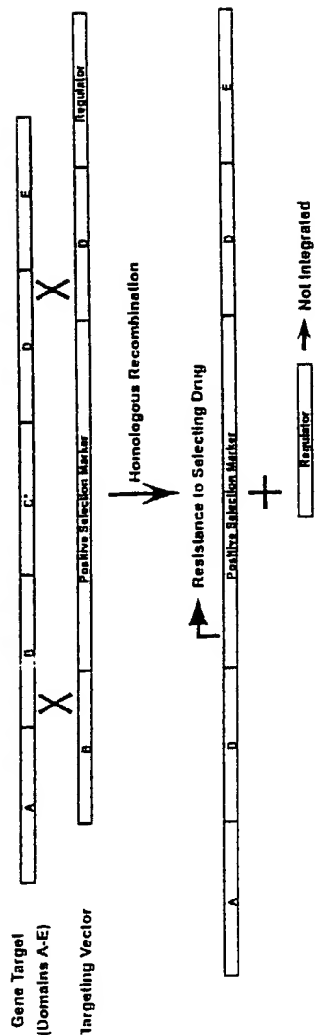
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5/16

A.

Homologous Recombination: Resistance to Selecting Drug



B.

Random Integration: Sensitivity to Selecting Drug

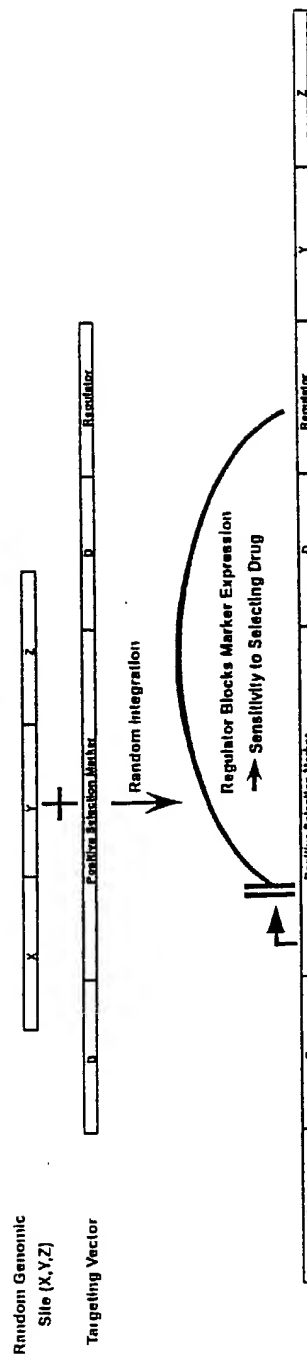


FIGURE 5

05554403 . 030402

FIGURE 6A



7/16

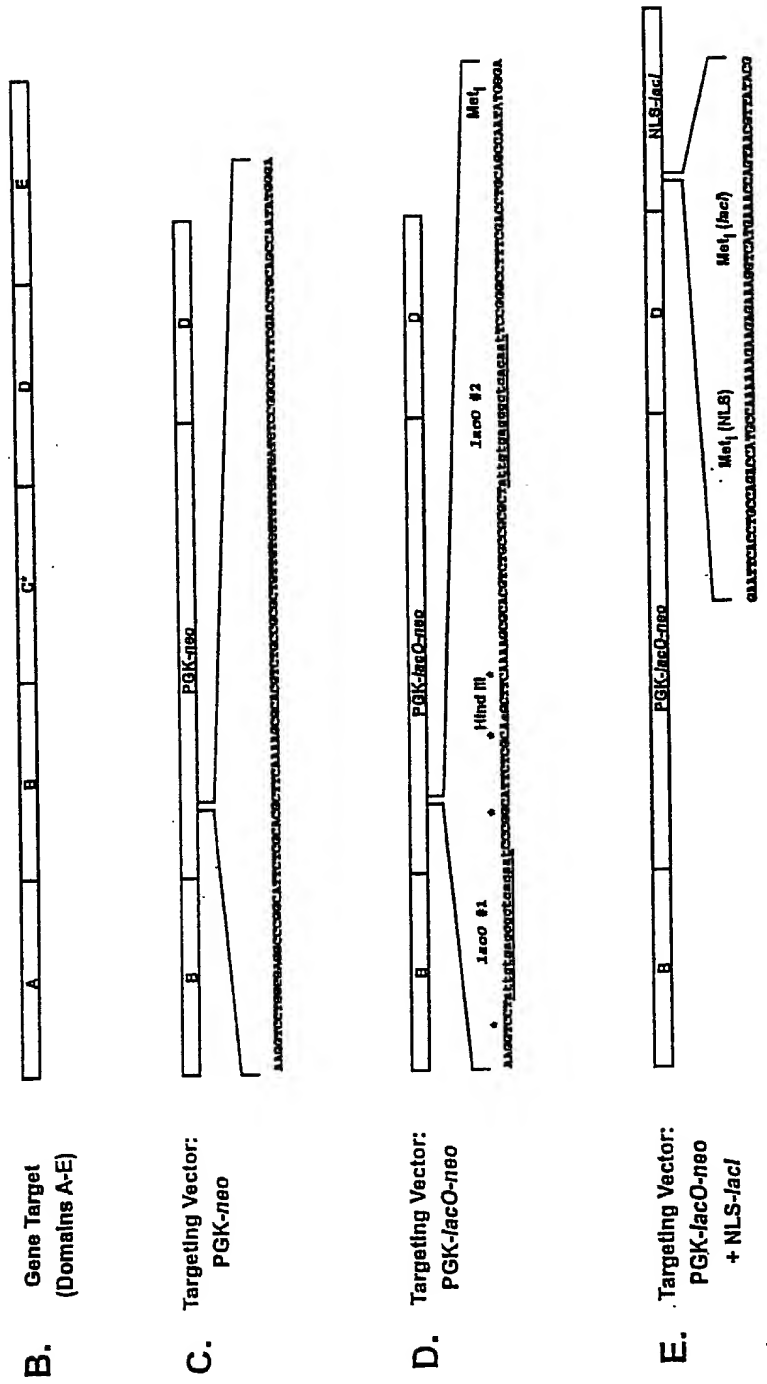


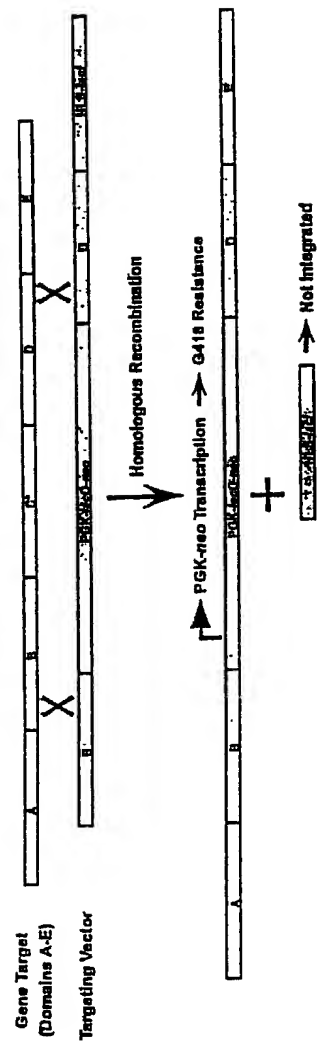
FIGURE 6 B-E



8/16

A.

Homologous Recombination: G418 Resistance



B.

Random Integration: G418 Sensitivity

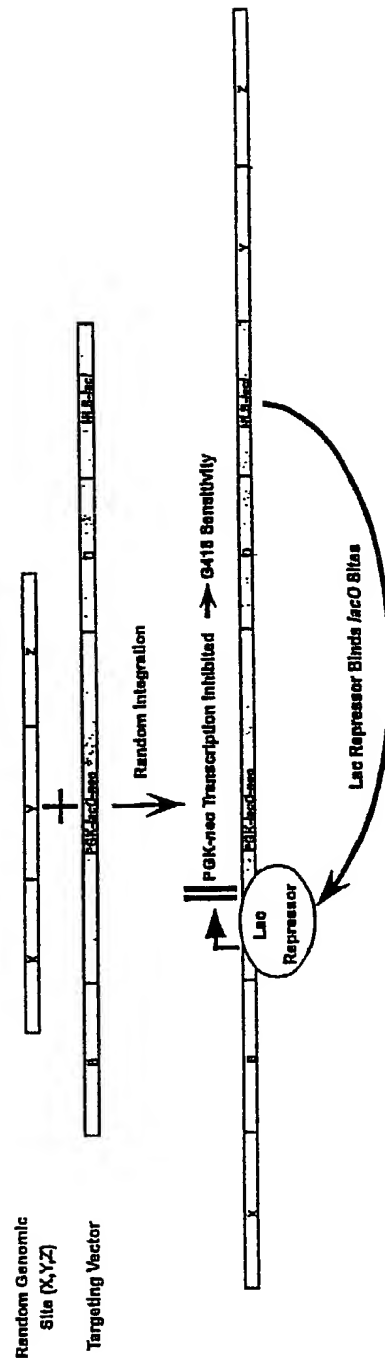
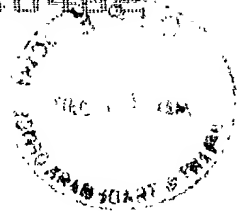


FIGURE 7

0 5 5 4 4 3 2 1 0 5 5 4 4 3 2 1 0

9/16



<u>Oligo #</u>	<u>Sequence (5' to 3')</u>
10164	CGGAATTCACCTGCCAGACCATGCCAAAAAGAAGAGAAAGGTCATGAAACCAGTAACGTTATACG
10165	CGGAATTCTCACTGCCCGCTTTCCAGTCG
10218	GCATTCTCGCAAGCTTCAAAAGCGCACGTCTGCCGCGCTATTGTGAGCGCTCAATTCGGGCCTTTCGACCTG
9959	TCATCAATTTCTGCAGAC
10219	TGCGCTTTTGAAGCTTGCGAGAATGCCGGGATTGTGAGCGCTCACAATAGGACCTTCGCGCCCGCC
4201	CAGGAAACAGCTATGAC

FIGURE 8



10/16

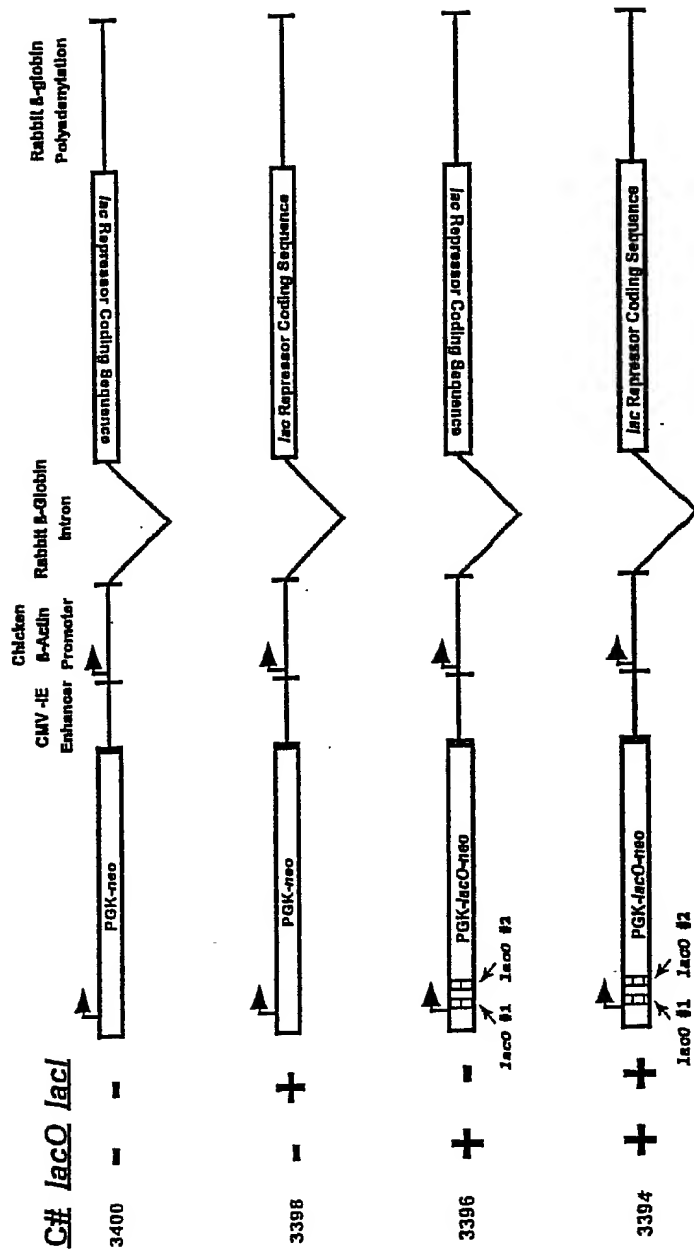


FIGURE 9

03054403 030403

11/16

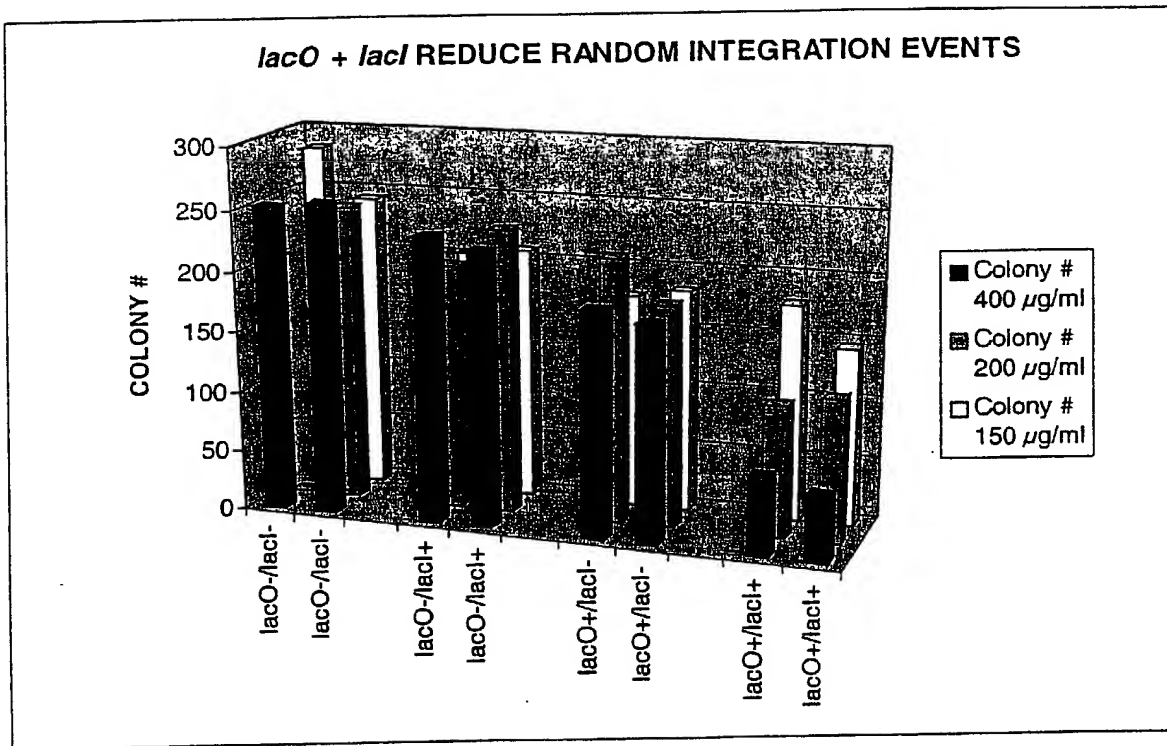


FIGURE 10



FIGURE 11

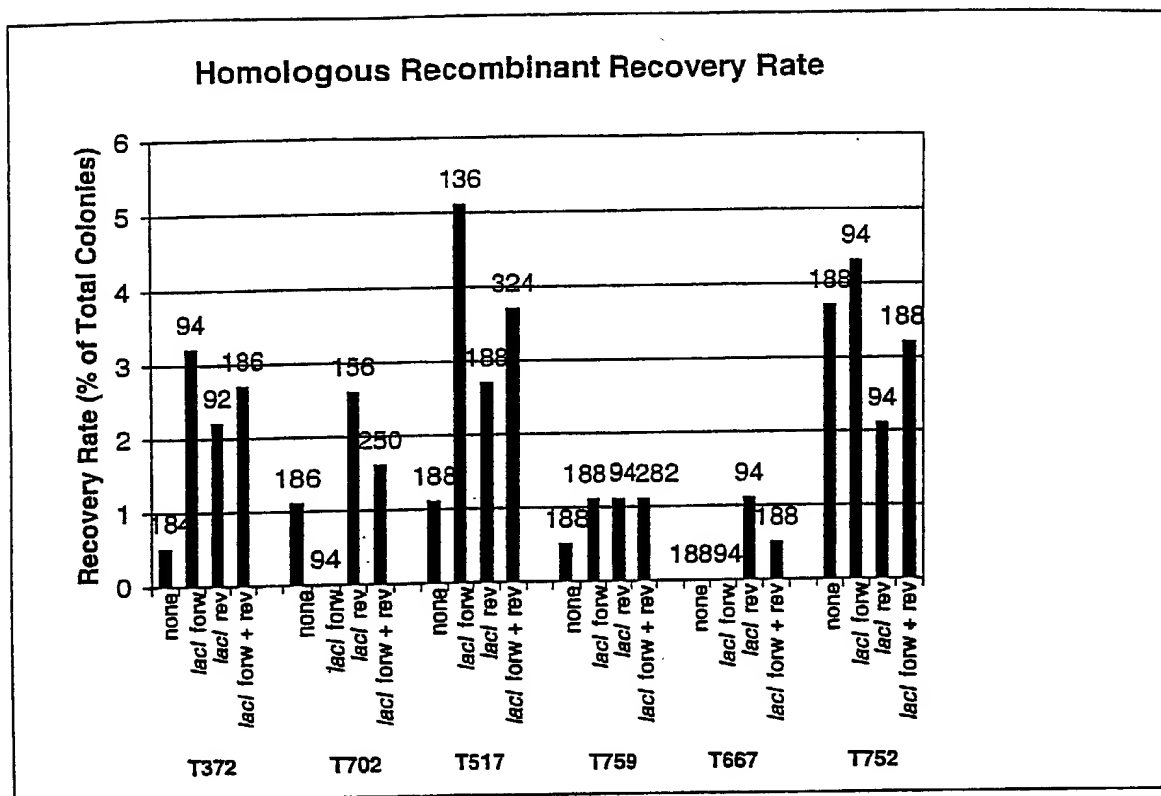
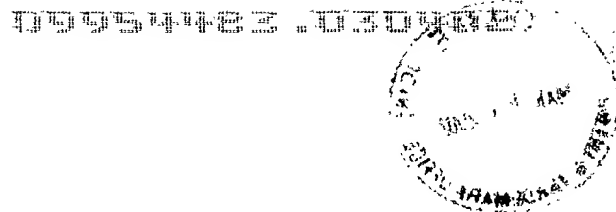


FIGURE 12



14/16

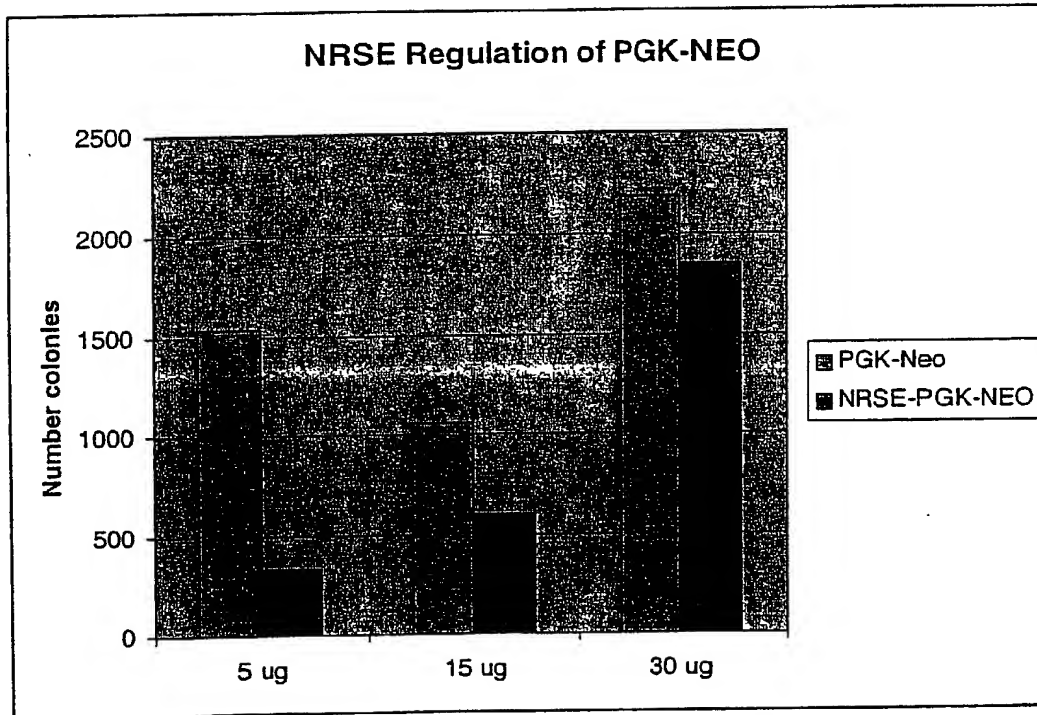


FIGURE 13



GCGGCCGCGAGTCGACGAGGCCGCGGATTAATTAAGGCTCgacattgattattgactag
ttattaatagtaatacaattacggggtcattagttcatagcccatatatggagttccgcgt
tacataacttacggtaaatggcccgctgggtgaccgcccacgacccccgcccattgac
gtcaataatgacgtATgttcccatagtaacgccaatagggactttccattgacgtcaatg
ggaggagtattttacggtaaaactgccacttggcagtaacatcaagtgtatcatatgccaag
tacgccccctattgacgtcaatgacggtaaatggcccgctggcattatgcccagtaacAT
GACCTTACGGGACTTTCCTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCAT
GGTtcgaggtgagccccacgttctgcttcaactctccccatctccccccccctccccacccc
caattttgtattttatttttttaattattttgtgagcgatggggggcgggggggggggg
ggcgcgccgagggcgggggcgggggcgggggcgagggcgggggcgggggcgagggcgaggt
gcgggcgagcccaatcagagcgggcgctccgaaagtttccttttatggcgagggcgggcg
cgggcgggccctataaaaAGCGAAGCGCGCGGGCGGGGAGTCGCTGCGTGTGCTTCG
CCCCGTGCCCCGCTCCGCGCCGCTCGCGCCGCCCGCCCCGGCTCTGACTGACCGCGTTA
CTCCACAGGTGAGCGGGCGGGACGGCCCTTCTCCTCCGGGCTGTAATTAGCGCTTGGTT
TAATGACGGCTCGTTTCTTTTCTGTGGCTGCGTGAAAAGCCTTAAAGGGCTCCGGGAGGGC
CCTTTGTGCGGGGGGAGCGGCTCGGGGGGTGCGTGCGTGTGTGTGTGCGTGGGGAGCGC
CGCGTGCGGCCGCGCTGCCCGGGCGCTGTGAGCGCTGCGGGCGCGGCGCGGGGCTTTGT
GCGCTCCGCGTGTGCGCGAGGGGAGCGCGCGGGGGCGGTGCCCGCGGTGCGGGGGG
CTGCGAGGGGAACAAAGGCTGCGTGCGGGGTGTGTGCGTGGGGGGGTGAGCAGGGGTGT
GGGCGCGGGGTGCGGCTGTAAACCCCCCTGCACCCCCCTCCCCGAGTTGCTGAGCACG
GCCCCGCTTCGGGTGCGGGGCTCCGTGCGGGGCGTGCGCGGGGGCTCGCCGTGCCGGGCG
GGGGGTGGCGGCAGGTGGGGGTGCCGGGCGGGGCGGGGCCCTCGGGCCGGGGAGGGCT
CGGGGGAGGGGCGCGGCGGGCCCCGGAGCGCCGGCGGCTGTGAGGCGCGGCGAGCCGAG
CCATTGCCTTTTATGGTAATCGTGCGAGAGGGCGCAGGGACTTCCTTTGTCCCAAATCTG
GCGGAGCCGAAATCTGGGAGGCGCCGCCGACCCCCCTCTAGCGGGCGCGGGCGAAGCGGT
CGCGCGCCGCGAGGAAGGAAATGGGCGGGGAGGCCCTTCGTGCGTGCGCCGCGCCGCTC
CCCTTCTCCATCTCCAGCCTCGGGGCTGCCGAGGGGGACGGCTGCCTTCGGGGGGGACG
GGGACGGGCGGGGTTCGGCTTCTGGCGTGTGACCGGCGGctctaGAGCCTCTGCTAACCA
TGTTTCATGCCTTCTTCTTTTCTTACAGctcctgggcaacgtgctggttgttgtgctgct
tcattcattttggcaagaattcGCCACCatggtgagcaagggcgaggagctgttcaccgg
ggtggtgcccacctggtcgagctggagcgagcgtaaacggccacaagttcagcgtgct
cgggcagggcgagggcgatgccacctacggcaagctgaccctgaagttcatctgcaccac
cggcaagctgcccgtgcccggccacccctgctgaccacccctgacctacggcggtgagtg
ctcagcgctcccccagaccacatgaagcagcagacttctcaagtcgcccagatcccgga
aggctacgtccaggagcgaccatcttctcaaggacgagcggaactacaagaccgcg
cgaggtgaagttcgagggcgacaccctggtgaaccgcatcgagctgaagggcatcgactt
caaggaggagcggaacatcctggggcacaagctggagtacaactacaacagccacaacgt
ctatatcatggccgacaagcagaagaacggcatcaaggtgaacttcaagatccgccacaa
catcgaggagcgagcgtgagctcgccgaccactaccagcagaacacccccatcgggcga
cgccccgtgctgctgcccagacaaccactacctgagcaccagtcgcccctgagcaaaaga
ccccaacgagaagcgcgatcacatggtcctgctggagtctgtagccgcccgggatcac
tctcggcagtgagcagctgtacaagtaaGAATTCACCTCCTCAGGTGCAGGCTGCCTATCA
GAAGGTGGTGGCTGGTGTGGCAATGCCCTGGCTCACAAATACCACTGAGATCTTTTTCC
CTCTGCCAAAAATTATGGGGACATCATGAAGCCCCCTTGAGCATCTGACTTCTGGCTAATA
AAGGAAATTTATTTTCATTGCAATAGTGTGTGGAAATTTTTTGTGTCTCTCACTCGGAAG
GACATATGGGAGGGCAAATCATTTAAACATCAGAATGAGTATTTGGTTTAGAGTTTGGC
AACATATGCCATATGCTGGCTGCCATGAACAAAGGTGGCTATAAAGAGGTCATCAGTATA
TGAAACAGCCCCCTGCTGTCCATTCTTATTCATAGAAAAGCCTTGACTTGAGGTTAGA
TTTTTTTATATTTTGTGTTTATTTTTTCTTTAATATCCCTAAATTTCTCTTAC
ATGTTTTTACTAGCCAGATTTTTTCTCCTCCTCTGACTACTCCAGTCATAGCTCCCTC
TTCTCTTATGAAGATCctcgacctgcagcccaagctCGGGGCCAGGTGCGCCGAGCGAT
CGCGAGAATTCGGCTTAAGTGAGTCGTATTACGGACTGGCCGTCGTTTACAACGTCGTG
ACTGGGAAAACCCTGGCGTTACCCAACCTTAATCGCCTTGACGACATCCCCCTTTCGCCA
GCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGA

FIGURE 14A



ATGGCGAATGGCGCTTCGCTTGGTAATAAAGCCCGCTTCGGCGGGCTTTTTTTTGGTTAA
CTACGTCAGGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTTGTTTATTTTCT
AAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCGTGATAAATGCTTCAATAAT
ATTGAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTCGCCCTTATCCCTTTTTTG
CGGCATTTTGCCTTCCGTGTTTTGCTCACCCAGAAACGCTGGTGAAAGTAAAAGATGCTG
AAGATCAGTTGGGTGCACGAGTGGGTACATCGAACTGGATCTCAACAGCGGTAAGATCC
TTGAGAGTTTTCGCCCCGAAGAACGTTCTCCAATGATGAGCACTTTTAAAGTTCTGCTAT
GTGGCGCGGTATTATCCCGTGTTGACGCCGGGCAAGAGCAACTCGGTCCCGCATACACT
ATTCTCAGAATGACTTGGTTGAGTACTCACCAGTCACAGAAAAGCATCTTACGGATGGCA
TGACAGTAAGAGAATTATGCAGTGCTGCCATAACCATGAGTGATAACACTGCGGCCAACT
TACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCACAACATGGGGG
ATCATGTAACCTCGCCTTGATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACG
AGCGTGACACCACGATGCCTGTAGCAATGGCAACAACGTTGCGCAAACTATTAACCTGGCG
AACTACTTACTCTAGCTTCCCGGCAACAATTAATAGACTGGATGGAGGCGGATAAAGTTG
CAGGACCACCTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAATCTGGAG
CCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCC
GTATCGTAGTTATCTACACGACGGGGAGTCAGGCAACTATGGATGAACGAAATAGACAGA
TCGCTGAGATAGGTGCCTCACTGATTAAGCATTTGGTAACCTGTCAGACCAAGTTTACTCAT
ATATACTTTAGATTGATTTACCCCGGTTGATAATCAGAAAAGCCCCAAAAACAGGAAGAT
TGTATAAGCAAATATTTAAATTGTAAACGTTAATATTTTGTAAATTCGCGTTAAATTT
TTGTTAAATCAGCTCATTTTTTTAACCATAAGGCGGAAATCGGCAAAATCCCTTATAAATC
AAAAGAATAGCCCGAGATAGGGTTGAGTGTGTTCCAGTTTGGAAACAAGAGTCCACTATT
AAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCCACT
ACGTGAACCATCACCCAAATCAAGTTTTTTTGGGGTCGAGGTGCCGTAAAGCACTAAATCG
GAACCCTAAAGGGAGCCCCGATTTAGAGCTTGACGGGGAAAGCGAACGTGGCGAGAAAG
GAAGGGAAGAAAGCGAAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAGCGGTACAGCTG
CGCGTAACCACACACCCCGCCGCGCTTAATGCGCGCTACAGGGCGCGTAAAGGATCTA
GGTGAAGATCCTTTTTTGATAATCTCATGACCAAAATCCCTTAACGTGAGTTTTTCGTTCCA
CTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCTGCG
CGTAATCTGCTGCTTGCAAACAAAAAAACACCGCTACCAGCGGTGGTTTGTGTTGCCGGA
TCAAGAGCTACCAACTCTTTTTTCCGAAGGTAACCTGGCTTCAGCAGAGCGCAGATACCAA
TACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCC
TACATACCTCGCTCTGCTAATCCTGTTACCAAGTGGCTGCTGCCAGTGCGGATAAGTCGTG
TCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCCGGCTGAAC
GGGGGGTTTCGTGCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCT
ACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCC
GGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGGAAACGCCTG
GTATCTTTTATAGTCCTGTGCGGTTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATG
CTCGTCAGGGGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCCTTTTTACGGTTCTC
GGCCTTTTGCTGGCCTTTTGCTCACATGTAATGTGAGTTAGCTCACTCATTAGGCACCCC
AGGCTTTACACTTTATGCTTCCGGCTCGTATGTTGTGTGGAATTGTGAGCGGATAACAAT
TTCACACAGGAAACAGCTATGACCATGATTACGCCAAGCTACGTAATACGACTCACTAG

FIGURE 14B